



'সমানো মন্ত্র: সমিতি: সমানী'

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Major 1st Semester Examination, 2023

**UMICMAJ11001-MICROBIOLOGY**

**INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

1. Answer any **five** questions of the following: 1×5 = 5
  - (a) Give an example of fungi imperfecti.
  - (b) What is heterothallism?
  - (c) Name two diseases caused by Prion.
  - (d) What is spontaneous generation?
  - (e) Name one organism which is arranged in grape like cluster.
  - (f) What is binary fission?
  - (g) Write down the function of Pseudopodium.
  - (h) What is heterokaryosis?
  
2. Answer any **three** of the following: 5×3 = 15
  - (a) Briefly explain the steps involved in the isolation of pure culture of bacteria by serial dilution and plating. 5
  - (b) Discuss with suitable figure about the haplobiontic life cycle of algae. 5
  - (c) Write down the general characteristics of fungi. 5
  - (d) Explain with suitable diagram the structure of fungal cell wall. Mention the name of the enzymes involved in synthesis of fungal cell wall. 3+2
  - (e) State the contribution of W. Beijerinck and Paul Ehrlich. 3+2
  
3. Answer any **two** questions of the following: 10×2 = 20
  - (a) Discuss with suitable diagram and example, different bacterial shapes and arrangements. What are the different methods for Cultivation of anaerobic bacteria? 7+3
  - (b) Give a brief account of algae thallus organization and algae pigments with suitable examples. 7+3
  - (c) Write down the important constituents of potato dextrose agar media and discuss about their role in fungal growth. 3+7
  - (d) Write in detail about Koch's postulates. State the contribution of Elie Metchnikoff in Microbiology. 7+3

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